

What is claimed is:

1. Laser machining apparatus comprising:

a control means for outputting command pulse sets according to  
5 control parameter settings for controlling laser pulse output power;

a thinning-out means, into which the command pulse sets are  
inputted, for thinning out pulses from the command pulse sets, based on  
predetermined setting values;

an electric power supplying means for generating, in response to  
10 command pulse sets outputted from the thinning-out means, pulsed electric  
power supplied to a load; and

a generating means for pumping, so as to output a laser beam, a  
laser medium with which a discharging space is filled, by means of  
discharge generated by the pulsed electric power supplied from the electric  
15 power supplying means.

2. Laser machining apparatus as recited in claim 1, wherein the switching  
number of an inverter circuit in the electric power supplying means is  
changed according to orderly thinning-out of the command pulse sets by  
20 the thinning-out means.

3. Laser machining apparatus as recited in claim 2, wherein a switching  
period of the inverter circuit is set shorter than both the time constant for  
the rise/fall of the electric discharging power and the time constant for the  
25 fall of the laser output power.

4. Laser machining apparatus as recited in any one of claims 1 - 3, further comprising:

5 a switching means for setting thinning-out conditions for the command pulse sets outputted from the control means through the thinning-out means.

5. A control method for laser machining apparatus, so as to output a laser beam, including the steps of outputting command pulse sets according to control parameter settings for controlling laser pulse output power, of generating, in response to the command pulse sets, pulsed electric power supplied to a load, and of pumping a laser medium with which a discharging space is filled, by means of discharge generated by the pulsed electric power, the method for the apparatus comprising the step of:

15 changing the switching number of an inverter circuit in an electric power supplying means for generating the pulsed electric power, according to the command pulse sets being orderly thinned-out.

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